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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------|-------------|----------------------|---------------------|------------------|
| 10/604,185 | 06/30/2003 | Paul M Gaschke | BUR920020098US1 | 1184 |
| 30449 | 7590 | 05/03/2005 | | EXAMINER |
| SCHMEISER, OLSEN + WATTS | | | | NGUYEN, TUYEN T |
| 3 LEAR JET LANE | | | | |
| SUITE 201 | | | ART UNIT | PAPER NUMBER |
| LATHAM, NY 12110 | | | 2832 | |

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/604,185 | JOHN F. HAGIOS | |
| | Examiner | Art Unit | |
| | TUYEN T. NGUYEN | 2832 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 16 February 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-35 is/are pending in the application.
 4a) Of the above claim(s) 9-30 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-8 and 31 is/are rejected.
 7) Claim(s) 32-35 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date, _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over McAllister et al. [US 4,734,046] in view of Sasaki et al. [US 6,410,858].

McAllister et al. discloses a space transformer [figure 2] comprising:

- a multilayered circuit board;
- a power conductor [46];
- at least one power pin [52, 70, 80];
- a ground conductor [48];
- at least one ground pin [54, 72, 82];
- at least one decoupling capacitor [74, 84] electrically connected to the power and ground conductors and mounted to the circuit board; and
- at least one signal pin [56].

McAllister et al. discloses the instant claimed invention except for the arrangement of the decoupling capacitor.

Sasaki et al. discloses a multilayered wiring board [112] with inductor element disposed therein comprising a capacitor [113] inserted between the source layer and the ground layer of the wiring board [figures 2-3].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the capacitor's arrangement of Sasaki et al. in McAllister et al. for the purpose of reducing size of the transformer.

Regarding claim 3, McAllister et al. further discloses the ground conductor is located between the top surface of the space transformer and the power conductor; the power conductor is located between the ground conductor and the bottom surface of the space transformer; the one or more power pins pass through the ground conductor without electrically contacting the ground conductor; and the one or more signal wires pass through both the power and the ground conductors without electrically contacting either of the power or the ground conductors.

Regarding claims 4-5, the specific length of the power and ground pins would have been an obvious design consideration based on the intended applications/environments used.

Regarding claims 6-7, the specific inductance value of the decoupling capacitor would have been an obvious design consideration for the purpose of controlling the inductance of the transformer.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over McAllister et al. in view Sasaki et al., as applied to claim 1 above, and further in view of VanSchaick et al. [US 4,663,604].

McAllister et al. in view of Sasaki et al. discloses the instant claimed invention except for the coolant channel in the ground conductor.

VanSchaick et al. discloses a hollow conductor with coolant in a transformer.

It would have been an obvious to one having ordinary skilled in the art at the time the invention was made to include a coolant channel in the ground conductor of McAllister et al., as modified, as suggested by VanSchaick et al., for the purpose of providing heat transfer.

Double Patenting

Claims 1-2 and 4-7 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 and 4-7 of copending Application No. 10/604,899. Although the conflicting claims are not identical, they are not patentably distinct from each other because they're both claiming the same invention subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

Claims 32-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-8 and 31-35 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUYEN T NGUYEN whose telephone number is 571-272-1996. The examiner can normally be reached on M-F 8:30-6:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ELVIN ENAD can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTN *TTN*

Troyee T. Nguyen